

WHAT IS CLAIMED IS:

1. A nuclear camera system comprising:
  - a detector which acquires radionuclide event
  - 5 data;
  - an image processor which processes the event data to produce image data;
  - an image data storage medium which stores the image data; and
  - 10 an image data processor which formats the image data for storage on the storage medium in an extensible and open data format.
2. The nuclear camera system of Claim 1,
- 15 wherein the image data processor formats the image data in xml format.
3. The nuclear camera system of Claim 1 or 2,
- wherein the data format is self-descriptive.
- 20 4. The nuclear camera system of Claim 3,
- wherein the data format further comprises format definitions which are available with the image data.
- 25 5. The nuclear camera system of Claim 4,
- wherein a format definition describes the relationship between two or more pieces of image data.
- 30 6. The nuclear camera system of Claim 5,
- wherein the image data is stored in a data file; and
- wherein the image data file contains a pointer to a file storing a definition of the image data format.
- 35 7. The nuclear camera system of Claim 6,

wherein the pointer is to an address of a file stored on the nuclear camera system.

5        8. The nuclear camera system of Claim 6,  
wherein the pointer is to a URL address where the image data definition file may be found.

10       9. The nuclear camera system of Claim 6,  
wherein the image data file is of the form  
<image.xml> and wherein the image data format  
definition file is of the form <image.dtd>.

15       10. A nuclear camera system comprising:  
a detector which acquires radionuclide event  
data;  
an image processor which processes the event  
data to produce image data;  
an acquisition controller which acts to control  
the detector to acquire event data in accordance with  
20 a study protocol; and  
a control data storage medium, coupled to the  
acquisition controller, which stores control data in  
an extensible and open data format.

25       11. The nuclear camera system of Claim 10,  
wherein the control data is stored in xml format.

30       12. The nuclear camera system of Claim 11,  
wherein the control data comprises at least one of  
protocol data, collimator data, isotope data, and  
energy window data.

35       13. The nuclear camera system of Claim 12,  
wherein the control data is of at least one of the  
forms of protocols.xml, collimators.xml,

isotopes.xml, and energywindowsets.xml.

14. The nuclear camera system of Claim 12,  
wherein the acquisition controller executes a script  
5 utilizing an xml file to control the acquisition of  
event data.

15. The nuclear camera system of Claim 14,  
wherein the xml file utilized by the script is a  
10 protocol file of the form <protocol.xml>.

16. The nuclear camera system of Claim 13,  
wherein an xml files point to a format definition  
file of at least one of the forms of protocols.dtd,  
15 collimators.dtd, isotopes.dtd, and  
energywindowsets.dtd.

17. A nuclear camera system comprising:  
a detector which acquires radionuclide event  
20 data;  
an image processor which processes the event  
data to produce image data;  
an acquisition controller which acts to control  
the detector to acquire event data in accordance with  
25 a study protocol; and  
a control data storage medium, coupled to the  
acquisition controller, which stores control data in  
xml format, the control data comprising xml files  
provided by the camera system manufacturer and xml  
30 files modified or created by a camera user.

18. The nuclear camera system of Claim 17,  
further comprising an image data storage medium,  
coupled to the image processor, which stores image  
35 data in xml format.

19. The nuclear camera system of Claim 18,  
further comprising a user interface and a server,  
responsive to the user interface and coupled to the  
5 control data storage medium and the image data  
storage medium, which accesses xml control data files  
or xml image data files in response to user commands.

20. The nuclear camera system of Claim 19,  
10 wherein the server executes scripts which utilize xml  
control data files.

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